

Claims

1. A method of sealing a glass panel assembly by melting a seal frit which is applied between two mutually overlaid glass substrates, comprising,

a preliminary heat process where a temperature of said glass panel assembly is increased to a preliminary temperature within a forced flow of a heating medium, said preliminary temperature being lower than a temperature at which said seal frit begins to melt,

a pressure reduction process where a pressure surrounding said glass panel assembly is reduced while said preliminary temperature is maintained,

a sealing process where a temperature of said glass panel assembly is raised from said preliminary temperature to a sealing process temperature within a forced flow of a heating medium, and

a cooling process where said glass panel assembly is cooled within a forced flow of a cooling medium.

2. A glass panel assembly sealing process furnace incorporating a transport mechanism as means of transporting a glass panel assembly therethrough and melting a seal frit which is applied between two mutually overlaid glass substrates of said glass panel assembly, comprising,

a preliminary heating part, a pressure reduction part, a sealing treatment part and a cooling part sequentially disposed along a transport direction of said glass panel assembly by said transport mechanism, and

pressure adjustment parts, which are capable of increasing and decreasing pressure, installed between said preliminary heating part and said pressure reduction part, and also between said pressure reduction part and said sealing treatment part, wherein,

said preliminary heating part heats said glass panel assembly by a forced flow of a heating medium to a preliminary temperature, said preliminary temperature being lower than a temperature at which said seal frit begins to melt,

said pressure reduction part decreases a pressure surrounding said glass panel assembly and maintains said preliminary temperature,

said sealing treatment part heats said glass panel assembly by a forced flow of a heating medium to a sealing process temperature from said preliminary temperature, and

said cooling part cools said glass panel assembly by a forced flow of a cooling medium.